



The Other Side of the Library Coin:

Georgia Tech's Experience in Broadcasting Scholarly Information

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The Future of Libraries

- **What will academic libraries look like in the future?**
 - What information will they hold?
 - What services will they provide?
 - What infrastructures will there be?
- **Your Campus' Intellectual Output:**
Libraries are helping to produce, collect, organize, and disseminate it
- **Product of Education and Research:**
Diverse and voluminous
Must be well-managed for the long run
- **Research, Learning, Communication:**
Study / analyze contemporary academic processes
- **Repositories are proliferating:**
Over **1100** IRs in OpenDOAR **in 6 yrs!**



Intellectual output includes diverse items such as:

Older forms:

- Annual reports
- Conference papers and proceedings
- Instructional and workshop materials
- Lecture series and symposia materials
- Pre-prints/post-prints
- Research reports
- Technical reports, working papers, white papers
- Web pages

Newer forms:

- Computer programs
- Digital data and data sets (informatics-based, research databases, etc.)
- Digital audio/video
- Learning/complex objects (digitally captured courses, multimedia simulations/visualizations, captured notes of faculty/students, etc.)
- Simulations/visualizations/virtual models
- Wikis, Blogs, etc.

Broadcasting?

- What do I mean by “Broadcasting”?
 - Think of... Producer / Production company
 - i.e. Radio / Television / Film / Media outlets
 - The Act of Producing and Distributing...
 - “The digital production and management of information is central to the redefinition of university libraries.”
 - “Library content is now defined by access, and the library’s role is one of collaborator in the production and dissemination of knowledge.”

(Emory Libraries Strategic Plan, 2008-12)

library 1.0

acquire

lend
find

store

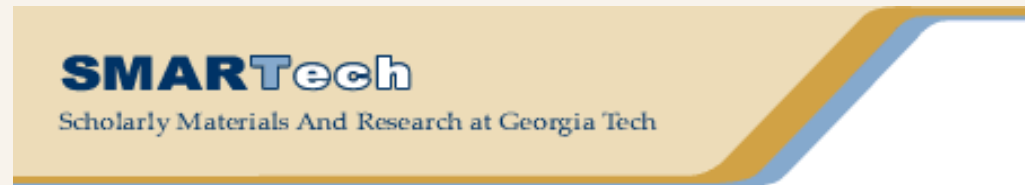


Library and
Information Center

Courtesy: Robert McDonald / SDSC



Organization, Access, Dissemination



Repositories:

- for capture of the university intellectual output in support of its teaching and research missions
- **SMARTech (DSpace, est. Aug. 2004)**
 - 18,000 objects
 - 34 communities/85 sub-communities/265 collections
 - 1,407,041 items viewed (July '06 – June'07)
 - 1,698,792 items downloaded
 - 261,464 searches
- **SMARTech is the:**
 - 5th largest of 56 DSpace repositories in the United States
 - Top 10% of any repository platform in the world

Four Types of Intellectual Output

- The four major categories of output being reviewed are:
 1. **Faculty and researchers' scholarly communications**
 - (i.e., pre-/post-prints, journal articles, conference papers, research reports, technical papers, etc.)
 2. **Student intellectual output**
 3. **Learning objects and other multimedia-based works**
 4. **Digital research data sets**
- These resources pose new challenges, also present new opportunities
- Libraries extending capabilities to manage these resources for future
 - becoming integral to academic knowledge dissemination processes

Faculty and Researchers' Scholarly Communications

- **Formal, i.e.**
 - Journal publications, research papers, technical reports, working papers, conference papers, lectures, records, personal papers
- **Informal, i.e.**
 - Listservs, threaded discussion lists, chat, virtual community sites / collaboration spaces, blogs, wikis, e-mail, etc.
- Conversational / transactional elements of research process more important as libraries capture disciplinary debate and development
- Study informal modes, design solutions for capturing and providing additional access to these resources

IR can be a central tool in the challenge of organizing and accessing both formal and informal scholarly communications. Increasingly, will be created, transmitted, and maintained in myriad digital forms

Student Intellectual Output

Undergrad Research Programs

- Growth of UG research - programs, scholarships, awards, international research
- GT: Submit output to SMARTech (via ETD-db software for ETDs)
- GT Examples:
 - Summer Undergraduate Research Experience
 - Undergraduate Research Scholars Program
 - President's Undergraduate Research Award



GT Library East Commons

Student creative activity, exhibits, presentations, performances, research / digital renderings: SMARTech

Multimedia and Repositories

Outgrowth of student multimedia projects, faculty's instructional materials, digitally-captured courses

GT Examples:

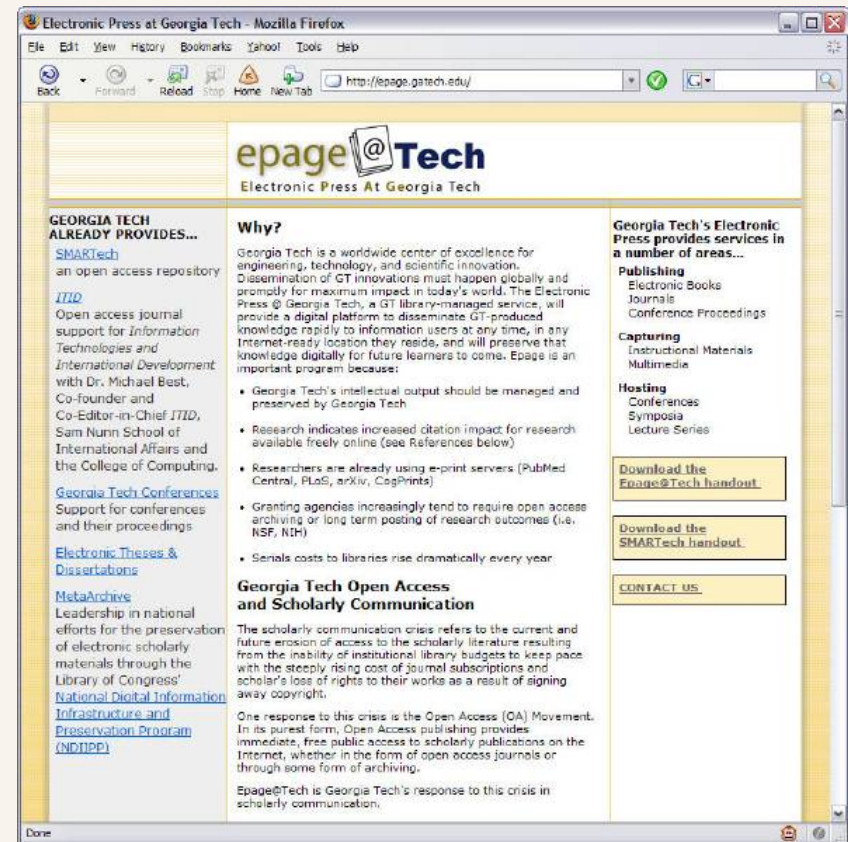
- LWC Multimedia Center / Student output increasingly multimedia, professors ask for it
- Migration: WebCT CE to Sakai – leverage expanding benefits of new virtual Collaboration and Learning Environment
 - Integration of library technologies, content, services
- ECE Digital Media Lab, Educational Tech., Distance Learning, Library:
 - Infrastructure-building



Schol Comm Svcs: EPAGE@Tech

- New Library Services:
 - Support creation, use of digital resources in new/different ways
- **Publishing**
 - Electronic Books
 - Journals
 - Conference Proceedings
- **Capturing**
 - Instructional Materials
 - Multimedia
- **Hosting**
 - Conferences
 - Symposia
 - Lecture Series

Cultivating active partnerships with faculty is how libraries will continue to transform into high-value hubs of information services



The Tower:

home > organizations > results - Mozilla Firefox

File Edit View History Bookmarks Tools Help

https://cyberbuzz.gatech.edu/main/organizations/organizations_showPage.php?OrgID=781

Umlaut it! Georgia Institute of T... Georgia Tech :: SPEC... WAG the Dog WebMail - Login Google Sustaining Digital Libr... MAXIMUS iParent

0 New Messages home > organizations > results

Cyberbuzz
POWER TO THE STUDENTS

PREFERENCES LOGIN GT LOOKUP

HOME CALENDAR ORGANIZATIONS FORUMS STUDENTGUIDE WEBMAIL SUPPORT

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organizations

The Tower

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Last Updated: 2008-02-19

Organization Contact Information: Address: Office of Student Media, 353 Ferst Dr Atlanta, GA 30332-0290
Email: N/A
Phone: N/A

Fees/Dues: \$0.00/N/A

Meeting Info.: Location: Student Media Office
Time: Wednesday 2-4 PM
Frequency: N/A

Classification: Production, Performance, Publications
Constitution: [View Constitution](#) | [Save Constitution](#)
Description: The Tower shall publish a collection of articles regarding undergraduate student research at Georgia Tech.

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Weather
Atlanta, GA (30332)
This Afternoon : 70F°
Tonight: 42F°
Thursday: 73F°
Thursday Night : 47F°
Friday: 76F°

Quotes
Dr. Mehendale said:
"You are incorrect!"
—Generic response to student answers.
[submit yours](#) | [I-book](#)

Done cyberbuzz.gatech.edu

start AIM Firefox >> home > organizations... G:\presentations and... Microsoft PowerPoint ...

1:48 PM
Wednesday
4/16/2008

- GT's Journal of Undergraduate Research

The Technique



- OIT: production server
- Library: pdf, image, text

WREK student radio campus interviews



Mp3 to WAV, provide both

Journal Publishing

The screenshot shows a web browser window with the URL <http://www.mitpressjournals.org/loi/itid?cookieSet=1>. The page is for MIT Press Journals, specifically for the journal ITID (Information Technologies and International Development). The header includes navigation links: Home, My Online Account, For Librarians, Help, and a Search bar. A "GO" button is next to the search bar. Below the header, there's a "Home >> List of Issues" link. The main content area features a large ITID logo, a list of issues (Volume 1, Number 1, Summer 2003), and a section titled "ITID is Open Access!". This section states that the full text of ITID is available for free and open access thanks to the generous support of the Microsoft Corporation. It provides a link to the "free site registration" and mentions that if you have already registered, you should log in now. Below this, there's a note about experiencing access problems or having questions about e-access registration, with an email address: journals-access@mit.edu. The "Inside the Journal" section lists links for Abstracting/Indexing, Reprints & Permissions, Call for Papers, Editorial Info, Instructions for Authors, Open Access, and Sponsorship. At the bottom, there's a "Submit a Manuscript to ITID" link and a Creative Commons Attribution Non-Commercial v.2.5 License notice. The Microsoft logo and "Your potential. Our passion." tagline are also visible.

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ITID Information Technologies and International Development Vol. 1 No. 1 Summer 2003

ITID

Dr. Ernest J. Wilson III, Founding Editor in Chief, Francois Bar and Dr. Michael L. Best, Editors-in-Chief

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Informative, lively, and provocative, *Information Technologies and International Development (ITID)* focuses on the intersection of information and communication technologies (ICT) with international development. *ITID* aims to create a networked community of leading thinkers and strategists to discuss the critical issues of ICT and development, an epistemic community that crosses disciplines (especially technologists and social scientists), national boundaries, and the North and South hemispheres.

The audience for *ITID* comes from academia, the private sector, NGOs, and government. It attracts readers interested in the "other four billion"-- the share of the world population whose countries are not yet widely connected to the Internet nor widely considered in the design of new information technologies.

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MIT / GT Library / Faculty partnership

Georgia Tech Library and Information Center

Conference Proceeding Publishing

http://www.planetaryprobe.org/

0 New Messages Overview | Sixth International Pl...

Georgia Institute of Technology

6TH INTERNATIONAL
PLANETARY PROBE WORKSHOP
June 21-27, 2008 :: Atlanta, Georgia, USA

IPPW-6

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Join us for the Sixth International Planetary Probe Workshop, or IPPW-6, on Monday-Friday, June 23-27, 2008, at Georgia Institute of Technology in Atlanta, Ga., U.S.A.

Explore technological challenges and scientific opportunities associated with entry, descent, landing and flight in planetary atmospheres with fellow scientists, technologists, engineers, mission designers, and policy-makers interested in the exploration of solar system bodies with substantial atmospheres.

Building on previous successes, the workshop will promote international cooperation in probe missions to solar system moons and planets with atmospheres and provide students—the next generation of planetary scientists—and spacecraft engineers, an opportunity to participate.

Session topics include:

- Mission concept studies
- Historical perspectives
- Ongoing and proposed technology development activities
- System challenges and innovative ideas for accommodating extreme environments
- Micro-probes and Mini-probes
- Sample return missions challenges
- Planetary entry science payloads
- The engineering and science of current planetary entry missions

The space community is focused on expanding our knowledge of planetary

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Lecture Series & Symposia

The screenshot shows a web browser window displaying the SMARTech search results page. The address bar shows the URL: <http://smartech.gatech.edu/simple-search?query=lecture&submit=Go>. The page header includes the SMARTech logo and the Georgia Tech Library & Information Center logo. The search results are for the query 'lecture' and show 1-10 of 893 results. The 'Collection hits' section lists several lecture series, including the Industrial Design Lecture Series, Lectures and Discussions, Nano@Tech Lecture Series, Prometheus Club Lectures, Computational Science and Engineering Distinguished Lecture Series, Distinguished Lecture Series in Systems Biology, Annual Harold W. Gegenheimer Lecture Series on Innovation, George W. Woodruff School of Mechanical Engineering Annual Distinguished Lectures, and Microsystems Packaging Research Center Distinguished Lecture Series. The 'Item hits' section is partially visible at the bottom.

SMARTech
Scholarly Materials And Research at Georgia Tech

Georgia Tech
Library & Information Center

Search SMARTech
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Advanced Search
Home

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Communities & Collections
Titles
Authors
Subjects
Date

Sign on to:
Receive email updates
My SMARTech authorized users
Edit Profile
Help
About SMARTech

Georgia Tech's Institutional Repository >

Search Results

Search: All of SMARTech
for lecture Go

Results 1-10 of 893.

Collection hits:

Collection Name
Industrial Design Lecture Series
Lectures and Discussions
Nano@Tech Lecture Series
Prometheus Club Lectures
Computational Science and Engineering Distinguished Lecture Series
Distinguished Lecture Series in Systems Biology
Annual Harold W. Gegenheimer Lecture Series on Innovation
George W. Woodruff School of Mechanical Engineering Annual Distinguished Lectures
Microsystems Packaging Research Center Distinguished Lecture Series

Item hits:

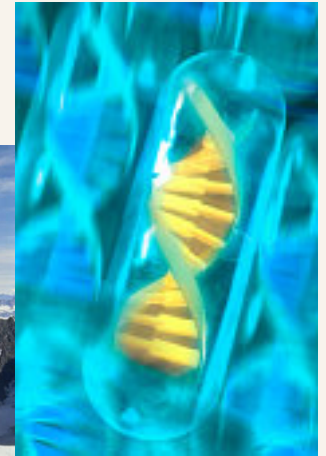
- Microelectronic Res. Ctr. Nano@Tech Lecture Series
- Industrial Design Lecture Series
- Distinguished Lecture Series in Systems Biology

The Future is Now!

- Building new cyberinfrastructure to undergird new broadcasting services:
- Research Data Management (curation)
- Digital Preservation
- Federated Repositories

Digital Research Data Sets

- New class of digital-born output: digital data sets generated from modern research processes
- Major Disciplines:
 - Sciences and engineering fields
 - Social sciences
 - Medical disciplines
- Examples:
 - Geospatial data
 - Social science / economic statistical, observational data
 - Biological / Medical data
 - Astronomical data
 - Nuclear physics data
 - Genomic and protein data



Digital Research Data Sets

Library Perspective:

- 1) a primary source that must be made available to support and advance research
- 2) an extension of scholarly publications, e.g., raw, digital data accompanying journal articles and technical papers

Challenges to Libraries:

- Lack of clear policies
- Incentives that promote digital data curation as integral part of research projects (i.e. NIH, NSF)
- Data curation tools, interoperable technologies
 - tools for data / metadata extraction, database emulation, data provenance tracking
- Scholar/Librarian/IT Partnerships
- A need for changes: organizational culture, technical infrastructure



Cyberinfrastructure for Intellectual / Research Content

Complexity and diversity of digital intellectual content - librarians, archivists, scholars, and researchers - need a common cyberinfrastructure to manage and foster its utilization

- ***“Cyberinfrastructure emphasizes not only technology, but policy and people to form a well integrated whole, fostering scholars’ and researchers’ participation in communities that advance Cyberinfrastructure” (2003)***
- **GT has worked on two key cyberinfrastructure components:**
 - 1) **Repositories**
 - SMARTech (DSpace)
 - DataSpace (MIT & Co.)
 - 2) **Digital Preservation Networks**

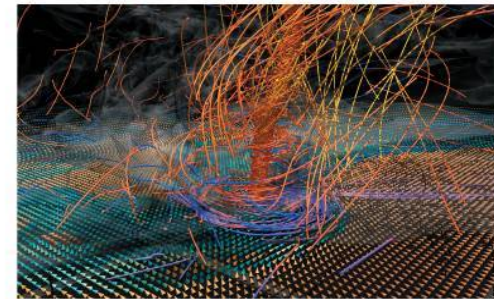
To Stand the Test of Time

Long-term Stewardship of Digital Data Sets
in Science and Engineering

A Report to the National Science Foundation from the ARL Workshop on
New Collaborative Relationships: The Role of Academic Libraries in the Digital Data Universe

September 26–27, 2006
Arlington, VA

*“Nature, to be commanded, must be obeyed.”
Attributed to Francis Bacon (1561–1626)
/ Novum Organum, bk.1, aph. 129 (1620)*



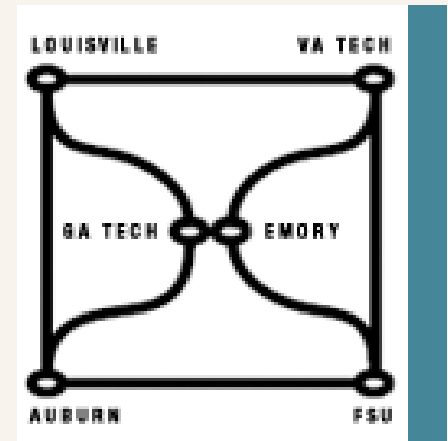
Report of the
American Council
of Learned Societies
Commission on Cyberinfrastructure for
the Humanities and Social Sciences



Infrastructure: Digital Preservation

- **MetaArchive Preservation Network**
<http://metaarchive.org>

- **Decentralized Approach** (question “one copy, one institution” approach)
- **Built on LOCKSS** (supports “distributed digital replication” approach).
- **Closed Archive** (No direct public access. High accessibility = high costs)
- **Automated format emulation tools**
- **Low Cost** (Planned minimal expense, low barriers to adoption for mid-size insts.)
- **Flexible, adaptable multi-inst. model**
- **LC / NDIIPP partnership** (1 of 8 initial)

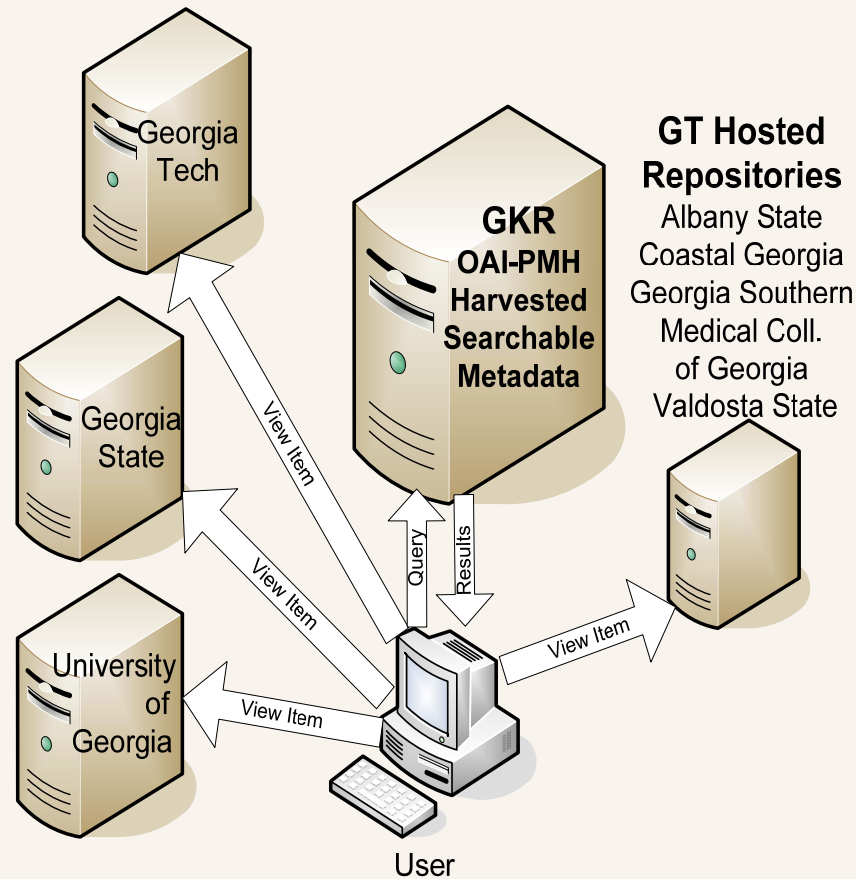
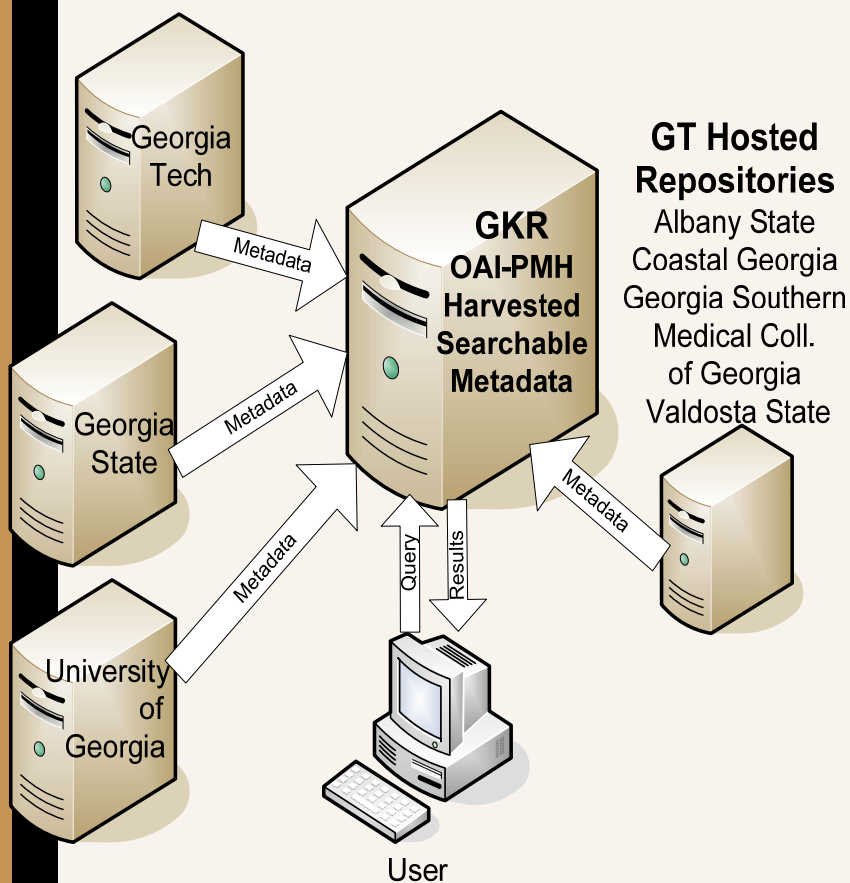


GALILEO Knowledge Repository:

A Federated Repositories Initiative

- 3 independent repositories at 3 USG research univs.
 - Plus, 5 new hosted repositories for USG schools
- Shared standards promote use and interoperability
 - Metadata, Nomenclature, and Harvesting
 - Search and Discovery
 - Rights management
- GKR Services
 - Searchable repository of harvested metadata
 - IR hosting service (DSpace): USG schools (GT)
 - Locally managed content
 - IR-related services:
 - Copyright research, Digitization,
 - Content submission, Preservation

**GKR
Distributed
Hosting
Model**



- **Figure 1:** Metadata is harvested from repositories using OAI-PMH, then a user searches across the metadata
- **Figure 2:** Once a user receives results, viewing an item will take them to the repository where the object resides
- **IMLS proposal: \$830,000 - 2008-2010**

IMPACT: GKR

- Increase USG visibility, prestige through global exposure to its digital scholarship and research
- Promote information sharing and discovery of research among the 35 USG institutions from a single web site
- Improve access to learning for the citizens of Georgia at large
- Create outlet for new forms of instructional media and scholarship, including open access scholarship
- Provide stewardship for the least permanent (i.e. non-published) elements of the USG's intellectual works
- Demonstrate the effectiveness of USG institutions and their faculty for assessment and accreditation purposes through enhanced access to their scholarly works
- Advance scholarly communication in U.S. by expanding use of IRs to more colls and univs, and explore open access for univ. press content

Concluding Thoughts...

- Libraries should be information and knowledge management centers
 - This includes production and dissemination
- In addition to our books and journals, there's a whole world of other information resources out there! Be alert. Find out what information is being created
- Libraries should be more about “process,” not just “product.” Information has a Lifecycle. Libraries can add value in each phase.

Thank you!

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